

2011 GreenGov Symposium
Oct. 31 - Nov. 2, 2011
Washington Hilton \* Washington, DC





# The Air Program Information Management System (APIMS)



Frank Castaneda, III, P.E.

APIMS Program Manager AFCEE/TDNQ

maintaining the data needed, and c including suggestions for reducing	lection of information is estimated to completing and reviewing the collection this burden, to Washington Headquuld be aware that notwithstanding and DMB control number.	ion of information. Send comments arters Services, Directorate for Infor	regarding this burden estimate or mation Operations and Reports	or any other aspect of the 1215 Jefferson Davis	nis collection of information, Highway, Suite 1204, Arlington	
1. REPORT DATE <b>02 NOV 2011</b>		2. REPORT TYPE		3. DATES COVE <b>00-00-2011</b>	red I to 00-00-2011	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER		
The Air Program Information Management System (APIMS)				5b. GRANT NUMBER		
				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) AFCEE/TDNQ,San Antonio,TX,78226-2018				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited						
13. SUPPLEMENTARY NOTES  Presented at the GreenGov Symposium, October 31 - November 2, 2011, Washington, DC						
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFIC	17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON			
a. REPORT unclassified	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE unclassified	Same as Report (SAR)	13	RESPUNSIBLE PERSON	

**Report Documentation Page** 

Form Approved OMB No. 0704-0188

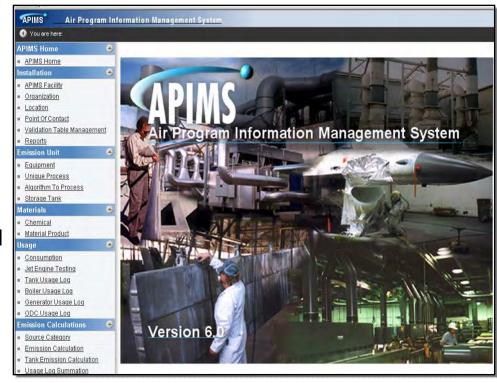
### What is APIMS?





### Air Program Information Management System:

- Sustainability of Enterprise air quality management system
  - Aspects and Impacts to Process
  - Auditing and Measurement
  - Goal Tracking and Achievement
  - GHG Tracking and Reporting
  - Air Emissions Inventory Preparation
  - Permit Management, Inspection and deficiency management.
  - Scalable to all Facilities
- GOTS Air Force owned



Available to all Federal Agencies (no licensing costs)

## Where is APIMS Today







## User Community (DoD)



#### PACAF

Eielson AFB J.B. Elmendorf -Richardson Kadena AFB Kunsan AFB Misawa AFB Osan AFB Yokota AFB

#### ACC.

Avon Park AFR Beale AFB Davis-Monthan AFB Dvess AFB Ellsworth AFB Holloman AFB Langley AFB Moody AFB Mountain Home AFB Nellis AFB Offut AFB Seymour Johnson AFB Shaw AFB

#### AETC

Altus AFB Columbus AFB Goodfellow AFB Keesler AFB Lackland AFB Laughlin AFB Luke AFB Maxwell AFB Randolph AFB Sheppard AFB Tyndall AFB Vance AFB

#### AFMC

Arnold AFB Brooks City Base Edwards AFB Eglin AFB Hanscom AFB HIII AFB Kirtland AFB Robins AFB Rome Labs Tinker AFB Wright-Patterson AFB

#### ANG

Alpena ANG BarnesANG Peoria ANG Pittsburgh ANG Selfridge ANG Sioux City ANG Salt Lake City ANG Willow Grove ANG

#### AFSPC

AMC Buckley AFB Cape Canaveral Los Angeles AFB Patrick AFB

J.B. Charleston Grand Forks AFB Little Rock AFB MacDill AFB Scott AFB

#### AFGSC

Barksdale AFB Malmstrom AFB Whiteman AFB Minot AFB

#### AFDW AFDW

Andrews AFB Bolling AFB

#### AFSOC

Cannon AFB **Hurlburt Field** 

#### Non Air Force

J.B. Lewis-McChord Ft Hood McAlester AAP Ft McPherson Ft Stewart Ft Carson Camp Lejeune Ft Gillem McChord

IT & Electronics – Session 7 **Sustainability Management Using "GOTS" Technology**  Hickam

Andersen

### What is APIMS?





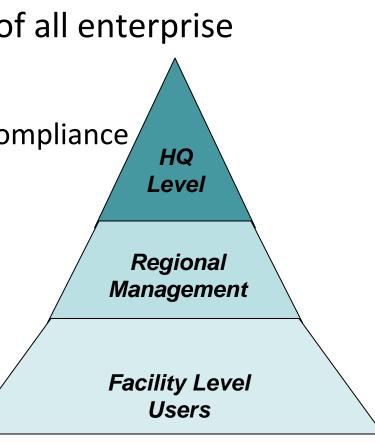
Supports a Multi-Tiered Organization

Supports reporting requirements of all enterprise

management levels:

 Supports facility Sustainability and compliance, tracking and reporting

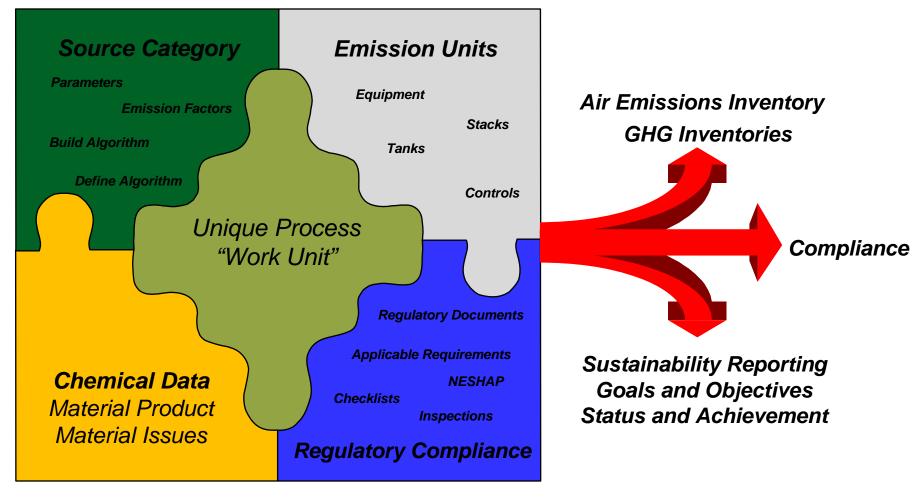
- Provides Enterprise data analysis
- Facilitates trend analysis
- Supports cost of compliance assessments



### What is Process Centric?







Work Driven accounting and reporting, allows emissions to be directly related to Mission Requirements, Weapons, Work Processes

## Why APIMS





- Data and Data System Consolidation:
  - Condenses 200+ different AEI formats to a single electronic format, Universal Air Emission Inventory
  - Eliminated over 15 stand alone Air Systems and countless spreadsheets.
- Data standardization:
  - Facilitates comparison analysis. "Apples to Apples"
  - Reduces data entry and maintenance
  - Drives uniformity in calculation methods
- Data quality improvement:
  - Standards based single repository
  - Reduced Keyboard entry errors
- Funding constraints:
  - Eliminates redundant and expensive IT systems
  - Reduces, training, data management, contractor assistance and error tracking cost



# APIMS Benefits Sustainability Management





- Air Emissions Calculations
  - Stationary, Mobile, GHG Sources
- Satisfies Air Requirements with Common Data Sets
  - Doing more with less
- Web Service Interfaces to Authoritative Sources
  - Ability to feed other systems
- Transparency to Mission
  - Who is generating what
  - What to reduce
  - Meets ISO 14001 regs.
- Permit Management
  - Measure Aspects and Impacts
  - Compares achievements to Objectives & Goals
  - Inspections and auditing



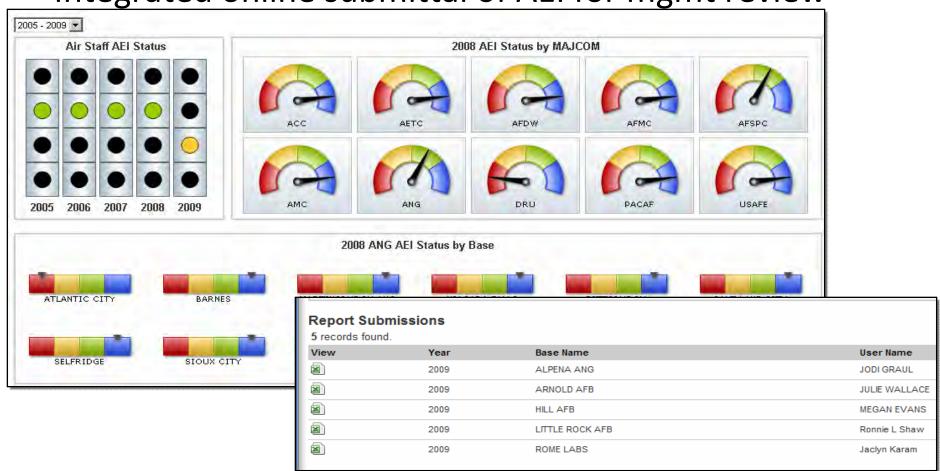
To-Be-Plan

## APIMS Executive Dashboards Real Time View of Enterprise





Integrated online submittal of AEI for mgmt review



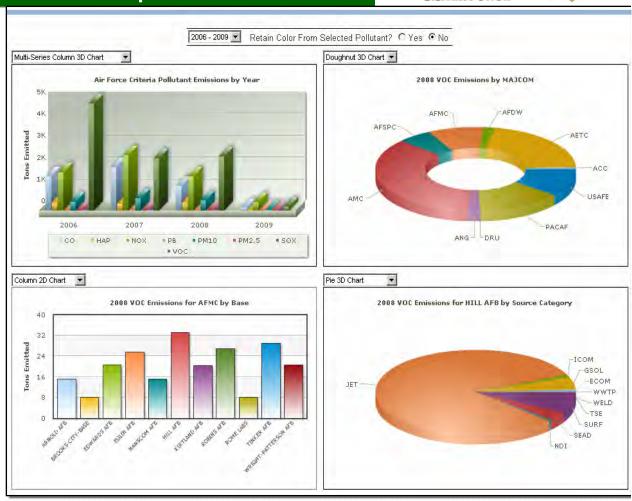
Dash board shows status by Command of Goal Achievement

# APIMS Executive Dashboards Drilling Into the Enterprise





- Transparency
- Mission Impact
- Multi Tier Drill in
  - Air Force
  - MAJCOM
  - Installation
  - Sources
- IdentifiesReduction Targets



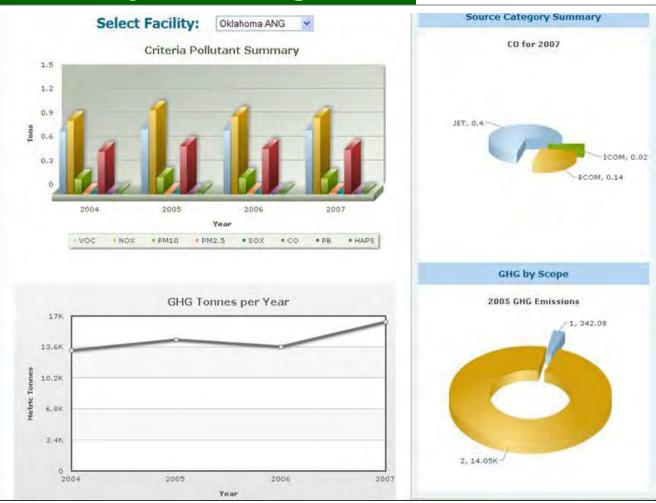
Dashboard displays, enterprise level criteria pollutants, MAJCOM contributions to total, MAJCOM Installation contributions to total, installation/source contributions to total

# APIMS Executive Dashboards GHG where are they coming from





- Transparency
- Mission Impact
- Reduction Targets
- Unsustainable processes



Dashboard displays, Facility criteria pollutants, CO by source contributions to total, Installation/Source contributions to total

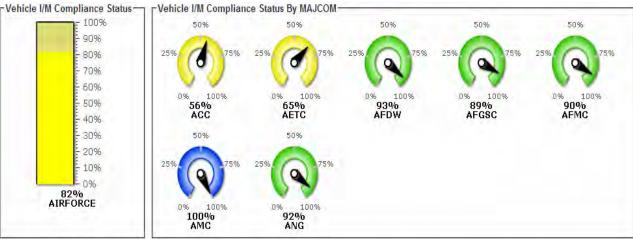
## APIMS Executive Dashboards Vehicle Emissions Management

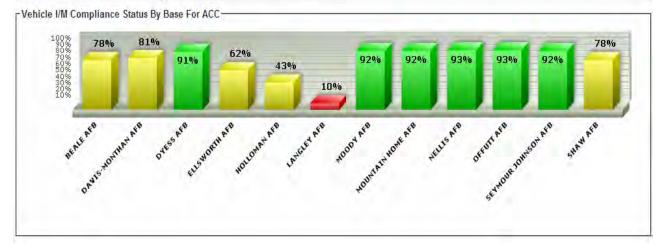






- Transparency
- Accountability
- eRecords Mgmt





Dashboard reflects the status of goal to have all vehicles on Air Force property compliant with vehicle emissions testing

# Case Study: AF Transformation to: Standardized Air Quality Management





#### APIMS Enabled Streamlined Management

- Transparency from HQ to Installation level reporting
- Standardized business processes and data across the enterprise
- Scalable to all size installations
- Provided millions \$ in cost avoidance
  - Consolidated 15 systems into 1
  - Single authoritative source of all AQ information

#### Force Multiplier to Operations

- Continual improvement of multi business processes
  - Six Sigma approach
  - Creates value in data
- Training standardized, what is done at smallest installation is reused in larger and vice versa "single source data entry"

#### Enterprise Management of all AQ Data

- Standardized algorithms and calculations
- Standardized AEI and GHG Reports
- Drill in directly to installation transactional data (Audit from afar)

### Point of Contact





Frank Castaneda, III, P.E.

AF Air Quality Subject Matter Expert and APIMS Program Manager, PMO

AFCEE/TDNQ

francisco.castaneda@us.af.mil,

(210) 395-8395 cell (210) 410-4361